

CLUBS

Robotics



FRC (FIRST Robotics Competition) Team 2073, EagleForce, is a FIRST (For the Inspiration and Recognition of Science and Technology) robotics team that builds robots for competing. The team attends multiple regional competitions with the robots they build and competes against other local teams. Depending on how well the team does, they may qualify for the FRC World Championships in Houston, Texas, where they compete against the best teams in the world.

EagleForce is successful due to their 3 main sub-teams: Mechanical, Business, and Programming. The Mechanical sub-team enables students to practice and improve their knowledge in engineering. They are given access to programs and machines typically taught to older IDEA students. In their Business sub-team, students improve their professional writing skills, learn how to track finances, and enhance marketing skills. They also learn event planning, organizing outreach events with various organizations in and out of the community. The Programming sub-team teaches students advanced programming skills. These skills are then used for coding robots to move and perform various functions. Some Programmers also code the Scouting app, which allows the team to collect data on other competing teams for alliance selection. All of the skills taught in robotics are useful for the students in and outside of school.

This year, EagleForce will be competing in the 2022 FIRST Robotics Competition *Rapid Reacts*. *Rapid Reacts* challenges teams to explore the future of transportation. Starting with the Kickoff event January 8th, teams are given a challenge and have two

months to design, manufacture, test, and program a robot able to complete the challenge. They will attend competitions, at which they compete in an alliance of three teams trying to earn as many points as possible.

Starting every competitive match, robots are autonomous and move without controls to score goals on their own. After 15 seconds, drivers are allowed to take control of their robots, attempting to pick up and score balls for the remaining 2 minutes and 30 seconds of the game. At the 30 seconds remaining mark, teams enter “Endgame” and must choose to either continue scoring or attempt to “climb” rungs at various heights. Points are totaled at the end of the match and teams either move up or down in the overall ranking. Top-ranking teams are made Alliance Captains at the end of the placement rounds, choosing other teams based on scouting data to join their alliance for elimination rounds. The winning alliance of elimination rounds attends World Championships and competes to be the top alliance in the world.

EagleForce is working hard to build their robot for the upcoming Arizona and Central Valley Regional Competitions in March. For updates and more information on the team, visit their website at www.team2073.com.



Written by: Robotics team
Edited by: Grace McKenna